**1. Assign an owner to the home page**

It's a common practice to run your applications and services under a user who has enough access to modify the system, but who is not a root user.

Here you'll modify the learn\_chef\_httpd cookbook's default recipe to assign the web\_admin user as the owner of the home page, /var/www/html/index.html. While you're at it, you'll configure the home page so that the web\_admin user has read and write access, and everyone else has read-only access.

Recall that your default recipe looks like this.

|  |
| --- |
| #  # Cookbook Name:: learn\_chef\_httpd  # Recipe:: default  #  # Copyright (c) 2016 The Authors, All Rights Reserved.  package 'httpd'  service 'httpd' do  action [:enable, :start]  end  template '/var/www/html/index.html' do # ~FC033  source 'index.html.erb'  end |

To assign the web\_admin user as the home page owner and set file permissions, you use the [template resource's](https://docs.chef.io/resource_template.html#properties) mode, owner and group properties.

Modify your default recipe like this.

|  |
| --- |
| #  # Cookbook Name:: learn\_chef\_httpd  # Recipe:: default  #  # Copyright (c) 2016 The Authors, All Rights Reserved.  package 'httpd'  service 'httpd' do  action [:enable, :start]  end  template '/var/www/html/index.html' do  source 'index.html.erb'  mode '0644'  owner 'web\_admin'  group 'web\_admin'  end |

**2. Apply the changes to your node**

Next you'll repeat the steps you performed in the previous part to apply your updated configuration on your node.

1. Update the cookbook's version metadata.
2. Upload the cookbook to Chef server.
3. Run chef-client on your node.

First, modify metadata.rb by setting the version field to '0.3.0'.

|  |
| --- |
| name 'learn\_chef\_httpd'  maintainer 'The Authors'  maintainer\_email 'you@example.com'  license 'all\_rights'  description 'Installs/Configures learn\_chef\_httpd'  long\_description 'Installs/Configures learn\_chef\_httpd'  version '0.3.0'  issues\_url 'https://github.com/learn-chef/learn\_chef\_httpd/issues' if respond\_to?(:issues\_url)  source\_url 'https://github.com/learn-chef/learn\_chef\_httpd' if respond\_to?(:source\_url) |

Next, run this knife cookbook upload command to upload your cookbook to the Chef server.

|  |
| --- |
| knife cookbook upload learn\_chef\_httpdUploading learn\_chef\_httpd [0.3.0]Uploaded 1 cookbook. |

Finally, run knife ssh to trigger chef-client to run on your node. This example shows key-based authentication.

knife ssh 'name:node1-centos' 'sudo chef-client' --ssh-user ec2-user --identity-file ~/.ssh/.pem --attribute ipaddress

You see that the chef-client run failed! Here's the error.

|  |
| --- |
| Chef::Exceptions::UserIDNotFound  cannot determine user id for 'web\_admin', does the user exist on this system? |

As you may have already realized, the updated configuration attempts to assign the file owner to a user that does not exist.

**3. Resolve the failure**

Now you'll perform these steps to resolve the failure. Steps 2—4 should be famililar to you.

1. Add the web\_admin group and user to the system.
2. Update the cookbook's version metadata.
3. Upload the cookbook to Chef server.
4. Run chef-client on your node.

First, modify your default recipe by using the [group](https://docs.chef.io/resource_group.html) and [user](https://docs.chef.io/resource_user.html) resources to define the web\_admin group and user.

|  |
| --- |
| #  # Cookbook Name:: learn\_chef\_httpd  # Recipe:: default  #  # Copyright (c) 2016 The Authors, All Rights Reserved.  package 'httpd'  service 'httpd' do  action [:enable, :start]  end  group 'web\_admin'  user 'web\_admin' do  group 'web\_admin'  system true  shell '/bin/bash'  end  template '/var/www/html/index.html' do  source 'index.html.erb'  mode '0644'  owner 'web\_admin'  group 'web\_admin'  end |

Remember that the order you define your resources matters. Therefore, it's important to define the web\_admin group and user *before* you assign them as the file owner.

Next, increment your cookbook's version metadata. Because you're making a bug fix, increment the last part of the version, making the version '0.3.1'.

|  |
| --- |
| name 'learn\_chef\_httpd'  maintainer 'The Authors'  maintainer\_email 'you@example.com'  license 'all\_rights'  description 'Installs/Configures learn\_chef\_httpd'  long\_description 'Installs/Configures learn\_chef\_httpd'  version '0.3.1'  issues\_url 'https://github.com/learn-chef/learn\_chef\_httpd/issues' if respond\_to?(:issues\_url)  source\_url 'https://github.com/learn-chef/learn\_chef\_httpd' if respond\_to?(:source\_url) |

Next, upload your cookbook to the Chef server.

knife cookbook upload learn\_chef\_httpdUploading learn\_chef\_httpd [0.3.1]Uploaded 1 cookbook.

Now run chef-client like you did previously. This example uses key-based authentication.

knife ssh 'name:node1-centos' 'sudo chef-client' --ssh-user ec2-user --identity-file ~/.ssh/.pem --attribute ipaddress

You see that the chef-client run succeeds. You also see that the file ownership changed from the root user to the web\_admin user.